ABSTRACT

A system for performing photonic constant envelope modulation utilizing a frequency shifted optical signal and a pure phase modulated optical signal. A coupler superposes the pure phase modulated signal and the frequency shifted optical signal. A set of detectors generates a photocurrent signal based on the superposed signals. A splitter generates a first optical signal and a second optical signal, wherein each represents nominally one half of an input optical signal. A filter, coupled to the set of detectors, is operable to remove a DC current from the photocurrent signal.